



ABSTRACT

A method of manufacturing a spin valve film, which produces a large read out signal.

After a completion of a film making process for forming a previous film of two films to be formed successively, but before an initiation of a film making process for forming a succeeding film of the two films, a step of decreasing an anisotropic magnetic field of the spin valve film is introduced by interrupting a film making process. This step may be performed by keeping a substrate within a sputtering vacuum chamber. The interruption can be shortened by exposing the substrate to a plasma, transferring the substrate in a separate vacuum chamber whose degree of vacuum is lower or whose H_2O or O_2 concentration is higher than that in the sputtering vacuum chamber, conducting a surface treatment with a gas containing H_2O or O_2 , or flowing a process gas.